

## **CHAPTER III**

### **RESEARCH METHODOLOGY**

#### **3.1. Methods of Data Collections**

There are three kinds of research development methods according to Creswell (2014) which are quantitative, qualitative and mixed methods. For quantitative, the instrument to collect data was close ended questionnaire which according to Creswell (2014) belongs to quantitative method. In addition to the questionnaire, the writer also conducted interviews which belong to qualitative method. The interviews were conducted to support the main data. This research aims at gathering data to answer the research question about how the teacher and children think about the writer's product.

#### **3.2. Participants**

The writer needs some respondents to collect questionnaire and some participants for interviews since the writer used mixed method. For answering the close-ended questionnaire, the respondents were 30 students of 1<sup>st</sup> graders of SD Masehi Jepara. As the writer targeted 30 respondents for sampling and population, therefore at least 27 representative samples were needed (Cohen, Manion, & Morrison, 2007).

The interviews were held for an English teacher in SD Masehi Jepara and one of the lecturers in Faculty of Language & Arts UNIKA Seogijapranata. These interviews are aimed at getting the respondents' opinion on the flashcard.

### 3.3. Instruments

In order to achieve the purpose of this research, the writer used two kinds of instrument to collect the data. First, the writer conducted interviews to find out if the product was appropriate for 1<sup>st</sup> grade students. By doing these interviews, the writer could get feedback and opinion from the participants. Second, the writer distributed the close-ended questionnaire to measure children's responses on the product. Then, the writer used Likert Scale to measure respondents' attitudes by asking people to respond to a series of statements. Likert type or frequency scales use fixed choice response formats and designed to measure attitudes or options. This is used to measure levels of agree/disagreement. The options of Likert Scale that the writer used were as follows:

- |    |  |     |
|----|--|-----|
| SD | : Strongly Disagree                    | (1) |
| D  | : Disagree                             | (2) |
| N  | : Neutral / Neither agree nor disagree | (3) |
| A  | : Agree                                | (4) |
| SA | : Strongly Agree                       | (5) |

### 3.4. Procedure

There were some steps used by the writer in examining the data which are described as follows:

### 1. Conducting Interview

The writer conducted an interview with Ms. Uzia Handayani who is the English teacher in SD Masehi Jepara. First, the writer contacted the teacher by phone to make an appointment in the school. After that, the writer went to the school to meet the teacher. The writer introduced the product in brief and had a consultation whether the materials and the product itself were suitable for the students or not. The result of the interview was good, and the teacher gave good responses on the writer's product. Since it was the first time the writer made the product, the writer only showed the prototype of the product. The teacher gave suggestions and feedbacks to help the writer evaluate and improve the product.

After that, the writer conducted another interview and validation with one of the lecturers in Faculty of Language and Arts, Unika Soegijapranata, Semarang. The result of this interview gave the writer commands and feedbacks to make the product better. All the interviews and data were recorded and attached at the end of data analysis.

### 2. Evaluating the Product

The writer evaluated the product used the suggestions and feedbacks from the English teacher and a lecturer.

### 3. Revising the Product

After getting some suggestions and feedbacks, the writer sorted out and revised the product. After the product is revised it, the product was ready to be produced.

#### 4. Designing Questionnaire

After revised the product, the writer started to design a questionnaire that would be distributed to 30 children. The questionnaires used Likert Scale. The writer made 12 statements with five options referred to the product. The writer did not provide any spaces related to the respondents' identity such as name and gender in order to keep their privacy. On the top part of the questionnaire, the writer provided a note of instruction about how to fill the questionnaire correctly. The questionnaire was written in Indonesian, considering the difficulty may be faced by the children if it was written in English.

#### 5. Piloting Project

Before collecting data, the writer did a pilot study in order to know if the questionnaires were valid or not. The invalid items of the questionnaires were dropped. The writer conducted a pilot study with 10 potential customers who had similar characteristics with the main target. The writer came informally to X school to distribute the questionnaire to 1<sup>st</sup> grade students. After collecting the data, the writer analyzed it using SPSS by referred to Cronbach's Alpha reliability level. The result of pilot study was analyzed using SPSS and attached below:

**Table 1**

*Data Validity of Pilot Study*

<b>Item</b>	<b>Corrected Item – Total Correlation</b>	<b>R Product Moment Value</b>	<b>Information</b>
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Q1	0.812**	0.5760	VALID
Q2	0.854**	0.5760	VALID
Q3	0.760*	0.5760	VALID
Q4	0.852**	0.5760	VALID
Q5	0.803**	0.5760	VALID
Q6	0.908**	0.5760	VALID
Q7	0.359	0.5760	INVALID
Q8	0.925**	0.5760	VALID
Q9	0.824**	0.5760	VALID
Q10	0.711*	0.5760	VALID
Q11	0.356	0.5760	INVALID
Q12	0.766**	0.5760	VALID

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Based on the table above, there are 2 invalid statements which were Q7 and Q11. The writer decided to drop those invalid statements without making any revisions because the writer thought the invalid statements were too similar to other statements. So the writer decided to use those 10 valid statements in the questionnaire that would be distributed to SD Masehi Jepara.

#### 6. Product Testing and Distributing Questionnaire

The next step after the pilot study was product testing. The testing was held on Monday, May 14<sup>th</sup> 2018 at 07.00 – 09.00 a.m. at SD Masehi which was located on Yos Sudarso Street 20A Jepara. The 1<sup>st</sup> grade class was split into two, class A and B. First of all, the writer introduced the product in brief to the students. The writer then split the students into some groups and each group chose the theme they wanted to learn. After that they had to guess and stuck the adhesive name tag into the correct place.

After that the writer distributed the questionnaire to 30 respondents after the product testing. The writer gave the instruction on how to fill in the questionnaire correctly with the help of the teacher.

#### 7. Analyzing and Interpreting Data

Since the writer had conducted the product testing and distributed the questionnaire, then the writer calculated and analyzed the obtained data using SPSS (Statistical Product and Service ver. 20). First, the writer inputted the data and calculated to find out the means of each questionnaire. There is a formula to determine the range scale, the formula is attached below:

$$RS = \frac{\text{Highest Value} - \text{Lowest Value}}{\text{Total Criteria}}$$

In this research, the range scale that was used to determine the criteria of students' response is attached below:

$$RS = \frac{5-1}{2}$$

The criteria of responses are:

- a. 1 – 3.0 = Negative
- b. 3.1 – 5 = Positive

### 3.5. Data Analysis

There were some steps that the writer did in analyzing the research data. First, the writer designed close-ended questionnaire and then distributed it to the participants. Next after all the data had been collected, the results of the questionnaires were analyzed using descriptive statistics. The writer counted the scores of each question and the final result would determine if the product could successfully develop children vocabulary or not. The writer used SPSS to analyze the quantitative data from the questionnaires.

### 3.5.1 Data Validity and Reliability

In this research, the writer had conducted a pilot study which is a test used to measure validity and reliability of the questionnaire items.

### 3.5.2 Data Validity

In doing a research, it is important to do a pilot study to make sure if the data is valid. The higher the validity rate of an instrument, the smaller error it could had. The validity level referred as *r* table moment. The criteria used refer to the formula  $df = N$  (total of sample) -2 with a significance level of 5%. In this research, the validity rate of the 10 students is 0.6139.

**Table 2**

*R Table*

df = (N-2)	0.05	0.025	0.01	0.005	0.0005
	Tingkat signifikansi untuk uji dua arah				
	0.1	0.05	0.02	0.01	0.001
1	0.9877	0.9969	0.9995	0.9999	1.0000
2	0.9000	0.9500	0.9800	0.9900	0.9990
3	0.8054	0.8783	0.9343	0.9587	0.9911
4	0.7293	0.8114	0.8822	0.9172	0.9741
5	0.6694	0.7545	0.8329	0.8745	0.9509
6	0.6215	0.7067	0.7887	0.8343	0.9249
7	0.5822	0.6664	0.7498	0.7977	0.8983
8	0.5494	0.6319	0.7155	0.7646	0.8721
9	0.5214	0.6021	0.6851	0.7348	0.8470
10	0.4973	0.5760	0.6581	0.7079	0.8233
11	0.4762	0.5529	0.6339	0.6835	0.8010
12	0.4575	0.5324	0.6120	0.6614	0.7800

The students were asked to cross a response out of the 5 options given; from ‘Strongly Agree’ to ‘Strongly Disagree’ for each statement. A score of 5 would indicate maximum agreement. Maximum disagreement would be shown as a score of 1 and 3 is the mid-point. After distributed the questionnaires to 10 students for the pilot study, the result of the data analysis showed that statement number 7 and 11 were invalid. Based on that, the writer dropped the 2 invalid statements and continued to spread the questionnaire with 10 statements instead. Then the



questionnaires were distributed to 30 students in the 1<sup>st</sup> grade of SD Masehi Jeparu.

The result of validity and reliability test is attached below:

**Table 3**

*Data Validation*

Item	Corrected Item – Total Correlation	R Product Moment Value	Information
Q1	0.812**	0.6319	VALID
Q2	0.854**	0.6319	VALID
Q3	0.760*	0.6319	VALID
Q4	0.852**	0.6319	VALID
Q5	0.803**	0.6319	VALID
Q6	0.908**	0.6319	VALID
Q7	0.925**	0.6319	VALID
Q8	0.824**	0.6319	VALID

Q9	0.711*	0.6319	VALID
Q10	0.766**	0.6319	VALID

### 3.5.3 Data Reliability

Reliability is the degree which the test consistently measures whatever is measures (Gay, 2012). In order to be a reliable research, one requirement is that the instrument must be consistent and dependable. The writer did the reliability test by referring to Cronbach's Alpha.

**Table 4**

*Cronbach's Alpha Reliability Level*

Interval Cronbach's Alpha	Criteria
> 0.9	Very High
0.7 – 0.9	High
0.5 – 0.7	Moderate
< 0.5	Poor

While the reliability level of the questionnaire is attached below:

**Table 5**

*Data Reliability*

Variable	Alpha's Cronbach	Information
Students' opinion on the writer's product	0,914	Very High

Based on the reliability result, the writer can conclude that the data is reliable as the reliability level reached  $>0,9$ . Thus the writer can say that the instrument data has a very high reliability level.

**3.5.4 Descriptive Analysis**

The writer used descriptive statistic in analyzing the data. Descriptive analysis explained about students' attitudes on the writer's product which is flashcards. In order to measure the collected data, the writer chose the mean of the variable. The value of mean is the sums of all the data in each variable and divided to the total respondents. The formula refers to the following:

$$Me = \frac{\sum Xi}{n}$$

Me = Mean

$\Sigma$  = Sigma

Xi = Value of X to i – to n

N = Total Respondents